

APPENDIX B

STATE CENTER COMMUNITY COLLEGE DISTRICT *Career Technical Education Charrette Worksheet* Summary of Key Findings, Gaps and Recommendations

1. CAREER PATHWAYS: GENERAL

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
A. Employees lack “soft skills” including collaboration, work ethic, working in teams, effective communications, critical thinking and problem solving, and attitude towards work.	Lack of soft skills continues to be a high priority with employers throughout business and industry.	<ul style="list-style-type: none"> • Include more soft skills training within the CTE curriculum and evaluate students on soft skills. 	
B. Technology continues to impact businesses and industry in a large way.	Colleges must avoid a “technology gap” between industry standards and what is being taught in the programs.	<ul style="list-style-type: none"> • Facilities must be able to support technology platforms that are constantly changing. • Curriculum needs to reflect the most state-of-the-art skills and knowledge of computer literacy through input from local advisory committees. 	
C. Facilities must be flexible so that industry/business partners can co-exist with college programs.	New facilities need to be designed to include industry presence in conjunction with CTE programs.	<ul style="list-style-type: none"> • Consult with local industries and businesses when designing new facilities. 	
D. Employers continue to cite the lack of “basic skills” – reading, writing and mathematics – with many employees not academically prepared to enter the workforce.	CTE students need a broader range of support services than most traditional, four-year post-secondary students.	<ul style="list-style-type: none"> • A focus on support services for CTE students is needed. Students need to declare a program of study through a formal and well-defined process. CTE programs need to be accessible to students and responsive to regional industry needs. 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
		<ul style="list-style-type: none"> Associate Degrees for students who are not intending to transfer need to be examined. 	
<p>E. An increasing number of students (and their parents) are not aware of career choices within the CTE pathways.</p>	<p>Many middle schools and high schools have reduced career awareness services that expose students to careers at an early age.</p>	<ul style="list-style-type: none"> Work closely with the K-12 districts to support increased activities that will give students and parents a better understanding of CTE careers (i.e., career expos, manufacturing cluster activities, college night, guest speakers, site tours, Career Skills Challenge events, etc.). 	
<p>F. Few student teachers are being recruited and prepared to teach CTE at the high school and community college levels.</p>	<p>There is high need to increase the number of credentialed teachers (traditional and non-traditional) for CTE programs.</p>	<ul style="list-style-type: none"> Increase marketing and promotion of teaching as a viable career for CTE students attending community colleges. Continue to connect with Fresno State Teacher Credential Program. Recruit currently-employed industry representatives who would be interested in teaching CTE courses. 	
<p>G. Collaboration between high school and community college faculty and leadership will result in better alignment of programs and services.</p>	<p>There is high need to increase emphasis placed on ongoing collaboration with CTE programs at the high school and community college levels.</p>	<ul style="list-style-type: none"> CTE faculty and administrative leaders meet a minimum of twice a year to align high school and community college curriculum and programs at all sites. Joint high school and community college advisory committees should meet at least twice a year to review current and future industry needs. Joint funding opportunities should be a high priority to maintain 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
		<p>state-of-the-art facilities and equipment and share facilities and equipment where appropriate.</p> <ul style="list-style-type: none"> • Instructor staff development and training is necessary to reflect the most current skills and knowledge of the industry/business. • California Common Core Standards need to be aligned with community college CTE program curriculum. 	
<p>H. Collaboration between business/industry and instructors and counselors can provide increased opportunities to keep current with trends and career opportunities.</p>	<p>Instructors find it difficult to keep current with constantly changing industry and business applications involving technology and operations.</p>	<ul style="list-style-type: none"> • Emphasize job internship opportunities for instructors through sabbatical leaves, industry-supported internships and grants. • Provide job shadowing opportunities and training on career pathway products for counselors who provide career awareness services to students. 	
<p>I. Colleges need metrics and outcome data to continuously improve pathways and align with local and regional labor market needs.</p>	<p>It is difficult to obtain workforce metrics due to students leaving CTE programs early and not maintaining contact with the colleges after obtaining certificate and/or degree.</p>	<ul style="list-style-type: none"> • Work with the Chancellor’s Office of California Community Colleges to establish a student identifier for high school students and community college students involved in training programs to track workforce progress and outcomes. 	

CAREER PATHWAYS: GENERAL – Additional Key Findings, Gaps and Recommendations			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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2. CAREER PATHWAY: ADVANCED MANUFACTURING

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
<p>A. The high rate of retiring baby boomers has created a need to train individuals to replace the highly skilled and experienced supervisors as they retire in the next few years.</p>	<p>There is need for the community colleges to work with industries in developing programs that will fill the gap for highly skilled supervisors.</p>	<ul style="list-style-type: none"> • Apprenticeship programs can address gaps and need to be replicated (e.g., JBT Food Tech-Madera Center Program). • Continue to work closely with union-supported apprenticeship programs. • Increase work-based training programs for students to be taught by industry supervisors at the work site. 	
<p>B. Industries use highly sophisticated equipment requiring employees who possess highly logical “systems-based” knowledge and skills.</p>	<p>Colleges cannot always afford to purchase new equipment specific to an industry need in a timely manner.</p>	<ul style="list-style-type: none"> • Industry brings equipment to the college for training, or college students go to the manufacturing location to learn unique or sophisticated machinery. 	
<p>C. EMSI Gap Analysis Report for all colleges indicates the largest gaps in the programmatic areas of opportunity were for blue collar occupations, including heavy and tractor trailer truck drivers, general maintenance and repair workers, and industrial machinery mechanics.</p>	<p>Additional training in these occupations is needed.</p>	<ul style="list-style-type: none"> • Increase marketing and training opportunities at colleges. • Build state-of-the-art facilities and purchase equipment that will result in highly skilled training. 	
<p>D. EMSI Gap Analysis Report for the colleges found skilled trades among the top areas of opportunity including electricians, pipe fitters and steamfitters, and carpenters.</p>	<p>There may be a need to expand skilled trades training programs and courses.</p>	<ul style="list-style-type: none"> • Work with local apprenticeship agencies to determine the need for additional training. 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
<p>E. Agricultural mechanics and advanced manufacturing mechanics career areas need to be coordinated in terms of career pathway awareness. (Included in Agriculture Findings)</p>	<p>There is a lack of awareness as to how the two areas are similar with career opportunities overlapping between both agriculture and advanced manufacturing (i.e., welding, maintenance mechanic).</p>	<ul style="list-style-type: none"> • Develop career awareness materials that highlight overlapping careers in both sectors. 	
<p>F. The recently formed Advanced Manufacturing Cluster now includes over 100 local industry partners, along with high school and college partners including SCCCD.</p>	<p>Increase awareness and participation in Manufacturing Cluster planning and activities.</p>	<ul style="list-style-type: none"> • Continue to involve administrators and instructors in Manufacturing Cluster development and research opportunities for funding to support future plans. • Consider using the Reedley College Advanced Manufacturing model involving pre- and post- assessments of students, counseling, linked project-based learning, internships, and job placement in other CTE program areas. 	

CAREER PATHWAY: ADVANCED MANUFACTURING – Additional Key Findings, Gaps and Recommendations			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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3. CAREER PATHWAY: AGRICULTURE

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
<p>A. The ongoing drought in California has changed agricultural practices for the long term.</p>	<p>New crops, more efficient watering practices, new harvesting methods are needed to address the changes occurring in the San Joaquin Valley.</p>	<ul style="list-style-type: none"> • Agriculture programs continue to work closely with advisory committees, CSUF Irrigation and Center for Water Technology, Farm Bureau, and industry-based associations to develop curriculum that reflects the changes in cultural practices. • Facilities include state-of-the-art labs and equipment needed to train workers for current and future agriculture careers. 	
<p>B. Food contamination issues have resulted in an increased need for highly trained and licensed individuals to work in the food processing and agriculture sanitation areas.</p>	<p>Community college programs need to be established to address needs immediately and in the future. Need exists at both the growing location and processing facilities.</p>	<ul style="list-style-type: none"> • Continue to work closely with industry to develop current course curriculum, facilities and opportunities for sanitation training in the farms and food processing plants. 	
<p>C. More work needs to be done in marketing agriculture as a desired career pathway.</p>	<p>Old stereotypes of agriculture careers being only in production need to be changed to reflect highly technological and modern practices now being implemented.</p>	<ul style="list-style-type: none"> • Colleges need to work with industry and local school districts offering agriculture programs to promote agriculture as a highly skilled, high-wage career pathway for educated individuals. 	
<p>D. Madera Unified School District offers a comprehensive agricultural program with little opportunity for students to attend a community college agriculture program.</p>	<p>Reedley College is too far away for most Madera Unified School District students to attend after graduation.</p>	<ul style="list-style-type: none"> • Develop an agriculture program (facilities and curriculum) at the Reedley College, Madera Community College Center that provides a community college experience linked to the Madera Unified School District, as well as 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
		nearby Kerman, Chawanakee, and Yosemite Unified School Districts.	
E. Agricultural mechanics and advanced manufacturing mechanics career areas need to be coordinated in terms of career pathway awareness. (Advanced Manufacturing Task Force Report Finding)	There is a lack of awareness of how the two areas are similar with overlapping career opportunities between both agriculture and advanced manufacturing (i.e., welding, maintenance mechanic).	<ul style="list-style-type: none"> Develop career awareness materials that highlight overlapping careers in both sectors. 	

CAREER PATHWAY: AGRICULTURE – Additional Key Findings, Gaps and Recommendations			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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4. CAREER PATHWAY: BUSINESS

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
A. Business programs and departments at high schools have been reduced due to the high cost of maintaining equipment and software.	High school students need to be allowed to take business courses at the community college.	<ul style="list-style-type: none"> Develop “linked” courses with high school business programs to allow students to take advanced classes at the college with state-of-the-art laboratories. 	
B. High school business courses previously receiving college articulation credit are no longer viable.	Opportunities to fill gaps so that high school students can receive college credit need to be considered.	<ul style="list-style-type: none"> Establish Dual Enrollment business classes at the high schools. 	
C. Reedley College EMSI Gap Analysis reveals a workforce business gap for certificates in the fields of General Office Occupations and Clerical Services, and Accounting. Clovis Community College includes these occupations and business administration. FCC has the largest certificate gap in Sales and Salesmanship.	Consider additional training for certificate-level programs to fill the workforce gap at the community college level. Wages in some areas may be relatively low so additional research is needed. Projected jobs from 2014-2024 include Management (4% growth) and Business and Financial Operations (11% growth) with median hourly earnings between \$27.50-\$33.44.	<ul style="list-style-type: none"> Increase opportunities for students to receive certificates and Associate of Science degrees in these programs through additional training opportunities and facilities. 	
D. Fresno City College EMSI Gap Analysis Report for associate’s level business gaps includes Marketing and Distribution, Human Services, and Real Estate.	There may be a need to expand business programs to address gaps.	<ul style="list-style-type: none"> Add additional courses if substantiated by research. 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
E. Reedley College EMSI Gap Analysis Report lists the largest Associate Degree business gap as General Office Occupations and Clerical Services.	Consider additional courses in these areas.	<ul style="list-style-type: none"> Add additional courses if substantiated by research. 	
F. Clovis Community College EMSI Gap Analysis Report lists Accounting as the business program with the largest need.	Consider additional courses in these areas.	<ul style="list-style-type: none"> Add additional courses if substantiated by research. 	

CAREER PATHWAY: BUSINESS – Additional Key Findings, Gaps and Recommendations			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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5. CAREER PATHWAY: HEALTH SCIENCES

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
A. Almost all current training at the high school and community college levels focuses on traditional Patient Care or Therapeutic Services.	A need for more non-traditional occupations training is required to address new employment needs.	<ul style="list-style-type: none"> Consider training for Clinical Laboratory Scientists, Medical Coders, Occupational Therapy Assistants, and Community Health Workers. 	
B. Emerging health care professions demand highly qualified and competent professionals.	There is a need to increase the number of highly qualified candidates for degree programs.	<ul style="list-style-type: none"> Discussion regarding the need to create a more aligned degree articulation system needs to occur among high schools, community colleges and four-year colleges/universities (public and private). 	
C. Industry expectations are constantly changing in response to changes in health care services (e.g., Affordable Care Act, uninsured residents, aging population).	There is a need to better define what expectations will be required of community college graduates by the health care industry.	<ul style="list-style-type: none"> Common metrics for high school and community college programs need to be established which reflect industry expectations for program completers. Data sharing agreements need to be established between SCCCD and local high school districts to track student persistence, course taking patterns, and completion rates. 	
D. EMSI Gap Analysis for all colleges reported areas of opportunity at the associate level to include Medical and Clinical Laboratory Technicians, Diagnostic Medical Sonographers, and Medical Equipment Repairers.	There may be a need for additional training for these occupations as the current and projected jobs for the region include Healthcare Practitioners and Technical as growing 21% in the next ten years with median hourly earnings	<ul style="list-style-type: none"> Add additional facilities and courses to address gaps in these health care professional occupations. 	

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
	of \$39.22.		
E. EMSI Gap Analysis for the colleges includes certificate and associate degree surplus in the following areas: Licensed Vocational Nursing, Nursing, Dental Assistant, Health Information Coding, Emergency Medical Services and Medical Assisting.	Consider surplus numbers when planning for future programs.	<ul style="list-style-type: none"> May need to consider reduction in program offerings if surpluses continue to grow. 	

CAREER PATHWAY: HEALTH SCIENCES – Additional Key Findings, Gaps and Recommendations			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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6. DUAL ENROLLMENT

Key Findings	Gap Analysis	Recommendations	Charrette Feedback
<p>A. “Jobs for the Future College Credit Report” findings indicate dual enrollment to be an advantage for high school students receiving college credit and a head start on their college degree.</p>	<p>Dual Enrollment has potential to provide college course credit for CTE students and increase their connections to community colleges.</p>	<ul style="list-style-type: none"> • Continue to work on establishing Dual Enrollment for California Community Colleges. • Assess current Dual Enrollment courses relative to student success, student and instructor feedback, and students’ continuation to community colleges and centers. 	
<p>B. Dual Enrollment can replace previous 2+2 articulation agreements thus allowing students the opportunity to earn college credit at the high school or community college.</p>	<p>It will be a challenge to find properly credentialed teachers who possess the minimum qualifications to teach community college classes at high schools (e.g., Master’s Degree). Presently credentialed community college instructors can help fill the gap.</p>	<ul style="list-style-type: none"> • Fresno Business Council Task Force Reports recommended Dual Enrollment as a major component of establishing sequenced and aligned programs among high schools and Community Colleges. 	

DUAL ENROLLMENT – Additional Key Findings, Gaps and Recommendations:			
Key Findings	Gap Analysis	Recommendations	Charrette Feedback
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